



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/017,961	12/07/2001	Geza Nemeth	0115-001	7474
37141	7590	03/24/2004	EXAMINER	
HULSEY, GRETHER, FORTKORT & WEBSTER, LLP 8911 N. CAPITAL OF TEXAS HWY. SUITE 3200 AUSTIN, TX 78759			MOSKOWITZ, NELSON	
		ART UNIT	PAPER NUMBER	
		3663		

DATE MAILED: 03/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/017,961	NEMETH, GEZA	
Examiner	Art Unit		
Nelson Moskowitz	3663		

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 15 December 2003.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-15 and 18-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-15 and 18-26 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ . |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ . |

Application 10/017,961

DETAILED ACTION

1. This action is in response to Applicant's letter received December 15, 2003. The amendments have been entered and the arguments have been considered.
2. The text of those sections of title 35 U.S. code not included in this action can be found in a prior Office action.
3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1-8, 19, 20, 22 and 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

These claims recite "the seismic receiver appears like an analog seismic receiver". This language is ambiguous as to what constitutes "appears like" and who determines what is, or is not, like an analog receiver. "Like" is a variant and a matter of degree. The metes and bounds of the degrees are not ascertainable from Applicant's disclosure, the prior art, or the knowledge of one skilled in this art.

4. Claims 1, 15, 19, 20 and 23 (claims 1, 19, 20 and 23 are rejected herein only to the extent now determinable) are again rejected under 35 U.S.C. 102(b) as being clearly anticipated by Orban et al. In response to Applicant's arguments see, inter alia, figure 4, depicting sensor (16), printed circuit boards 18 and 20; and figure 2 depicting ADC (34), filter 44, data storage in module 40, and telemetry 48 to and from the bus 50.

The system of Orban is disclosed to provide a better signal-to-noise ratio; allows digitized seismic data to be obtained from each sensor unit so that fewer sensor units are required; and permits the system to have a smaller size and less weight 20 (columns 1-2). This is incentive to the artisan to use such a system.

Please note that the specific reference constituents cited herein are done so for the convenience of the Applicant and are in no way intended to be limiting. The reference should be considered in its entirety.

5. Claims 1, 2, 7, 9, 10, 12, 14-15 and 22-23 are rejected (claims 1 and 23 are rejected herein only to the extent now determinable) under 35 U.S.C. 102(b) as being clearly anticipated by Fort. See, *inter alia*, figures 1 and 2 and columns 5-8 and 18-19. Note digital geophones GE1, GE2, , and digital computer components

6. Claim 15 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by Donoho et al. See, *inter alia*, figures 2-5 and columns 6-8.

7. Claims 1-15 and 18-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Orban et al with Ward.

In determining obviousness, the following factual determinations are made:

- a. first, the scope and content of the prior art;
- b. second, the difference between the prior art and the pending claims.
- c. third, the level of skill of a person ordinary skill in this art; and
- d. fourth, whether other objective evidence may be present, which indicates

obviousness or nonobviousness. See, e.g., *In re Dembiczaik*, 175 F.3d 994, 998, 50 USPQ2d

1614, 1616 (Fed. Cir. 1999) (citing *Graham v. John Deere Co.*, 282 US 1, 17-18, USPQ 456, 466-67 (1966)).

Objective evidence includes long felt but unmet need for the claimed invention, failure of others to solve the problem addressed by the claimed invention, and not other factors. See, e.g., *Simmons Fastener Corp. v. Illinois Tool Works, Inc.*, 739 Fed. 1573, 1574-76, 22 USPQ 744, 745-47 (Fed. Cir. 1984).

a) In examining the scope and content of Orban et al it is found that placement of an analog output sensor, with a printed circuit board, analog to digital converter, and a processor, in a single housing are disclosed. The advantages of improved S/N, reduction in the number of sensor units required for prospecting, and significant reduction in size and weight.

b) Ward et al teaches that seismic prospecting systems include control circuits, amplifiers, and power management, in order to improve the data collection process.

Third, under *Deere* the level of ordinary skill in this art may be determined by the analysis of the Court as set forth in *Environmental Design Ltd. v. Union Oil Co.* 713 F.3d 693, 218 USPQ 865-69 (Fed. Cir. 1983) cert. denied, 464 U.S. (1984), where the court listed these factors relevant to the determination of the level of ordinary skill: type of problems encountered in the art, prior art solutions, rapidity of innovations, sophistication of technology, and educational level of the active worker in the field.

The types of problems encountered in the art involve seismic prospecting with seismometers to provide accurate and reliable data from the processed signals.

Innovation in this field has been very fast as can be seen from virtual birth of this field in the 1950s to its present highly complex and sophisticated status.

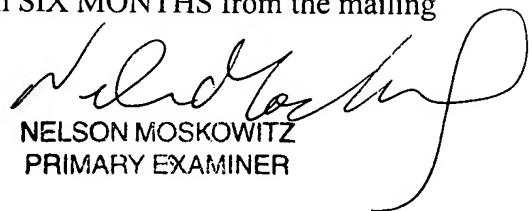
Prior art solutions include sensors with A/D and signal processors in a single housing. Skilled artisans generally have a college level education and over three (3) years of experience, as can be seen from published articles in the major journals in this field.

To date, no secondary considerations (objective evidence) have been presented.

Therefore, the use of such modern processing as taught by Ward, with single enclosures for the transducer, A/D converter, and control and processing circuits, would have been obvious to one skilled in the art for the aforesaid reasons of better quality signals, lower price and ease of placement.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.



NELSON MOSKOWITZ
PRIMARY EXAMINER